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(54) Title: DETECTING GENE EXPRESSION IN LIVE CELLS USING SHORT-LIVED REPORTERS WITH ENZYMICAL AMPLIFICATION

(57) Abstract: Disclosed herein are compositions and methods for detecting and analyzing both transcriptional and translational events occurring in live cells. In particular, short-lived reporters with enzymatic amplification are described. These reporters have relatively short maturation time and a short cellular lifetime which can be exploited to detect transient events of gene expression in live cells.

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## INTERNATIONAL SEARCH REPORT

International application No.

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/68  
 US CL : 435/6, 325, 252.33

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 MEDLINE, BRS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WORLEY, C.K. Engineering in vivo instability of firefly luciferase and Escherichia coli beta-glucuronidase in higher plants using recognition elements from the ubiquitin pathway. Plant Molecular Biology. 1998, Vol. 37, pages 337-347, see entire document.	1,2,5-7,9,10,21, 30-32,37-40
X	DANTUMA, N.P. Short-lived green fluorescent proteins for quantifying ubiquitin/proteasome-dependent proteolysis in living cells. Nature Biotechnology. May 2000, Vol. 18, pages 538-543.	1-6,9-12,21, 30-32,37-40

Further documents are listed in the continuation of Box C.

See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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